

California Regional Water Quality Control Board
Santa Ana Region

Cleanup and Abatement Order No. R8-2004-0042

For
Pyro Spectaculars, Inc.,
Mr. Thomas O. Peters
And
Whittaker Corporation

DRAFT

Five-acre parcel located at 2298 West Stonehurst Drive,
City of Rialto, San Bernardino County

The California Regional Water Quality Control Board, Santa Ana Region
(hereinafter Regional Board), finds that:

1. Mr. Thomas O. Peters currently owns property in Section 28, Township 1 North, Range 5 West, San Bernardino Base and Meridian, in the County of San Bernardino, State of California. Mr. Peters' property consists of approximately five acres ("the property"), on which about 25 buildings and storage units are situated.
2. Starting in 1955, Whittaker Corporation, the former Trojan Fireworks Company, and Astro Pyrotechnics (owned and operated by Pyro Spectaculars, Inc.) or their legal predecessors have conducted manufacturing operations on portions of the property. The manufacturing activities have been associated with onsite waste disposal practices. The property overlies the Rialto Groundwater Subbasin.
3. Aerial photographs indicate that the three parcels making up the 5-acre property were developed in several phases, beginning as early as 1955. Evidence indicates that the AMEX Products Division of Tasker Industries (AMEX Products) owned approximately 2.5 acres of the property in 1955. The AMEX Products facility address was 2298 West Stonehurst Drive, and included a general office, and 10 additional buildings. AMEX also operated a test range on 15 acres, adjacent to the 2.5 acres, at Alder Avenue. AMEX Products designed, tested and fabricated military and commercial pyrotechnic and explosive devices on this portion of the property. Perchlorate is known to have been a component of AMEX's products. In or about 1972, Tasker Industries merged into Whittaker Corporation. Records indicate that Whittaker Corporation thereafter became the owner of the 2.5 acres at 2298 West Stonehurst Drive until it sold the property to Mr. Peters in or about 1974. Mr. Peters then

purchased an additional 2.5 acres of adjoining property, creating the approximately 5-acre property.

4. Trojan Fireworks Company, a wholly owned subsidiary of Astro Pyrotechnics, began operating at the 5-acre site in or about 1973. Trojan Fireworks Company manufactured commercial fireworks through 1988 at this location. Perchlorate salts are known ingredients of common fireworks. Astro Pyrotechnics then purchased the assets of Trojan Fireworks Company, and Trojan Fireworks Company was dissolved.
5. In or about 1988, Pyro Spectaculars, Inc. purchased the assets of Astro Pyrotechnics. Astro Pyrotechnics has operated as a division of Pyro Spectaculars, Inc. since that time. Astro Pyrotechnics manufactures theatrical (1.4G) fireworks and pyrotechnic articles at the property. The fireworks are shipped to off-site, licensed professional customers. The Astro Pyrotechnics facility receives raw materials (including chemicals and paper goods), and assembles various types of fireworks inside small work buildings.
6. At the current-day Astro Pyrotechnics facility, raw and laboratory grade chemicals are stored in bulk in eight of the on-site buildings. Various other buildings are used for the manufacture and storage of fireworks products. Four of the work buildings had adjacent concrete pads that were installed in or about 2002 and were used until mid-2003 for collecting wastewater that was generated during the fireworks manufacturing process. This practice was discontinued at the direction of Regional Board staff. Prior to installation of the concrete pads, the wastes were discharged to small earthen containment basins that were lined with plastic.
7. The wastewater generated during the fireworks manufacturing process at Astro Pyrotechnics is a highly saline waste containing potassium nitrate, potassium perchlorate, and other perchlorate salts. Perchlorate salts are highly soluble and dissociate in water to form perchlorate ions. There are currently no state or federal drinking water standards for perchlorate. However, on March 11, 2004, the California Department of Health Services (DHS) established a revised drinking water Action Level (AL) for perchlorate of 6 parts per billion (ppb). An AL is a temporary safe drinking water level that is based on available studies that have been performed.
8. Perchlorate is currently present in the Rialto, Colton, Chino I and Chino II Groundwater Subbasins. The West Valley Water District, the Fontana Water Company, and the Cities of Rialto and Colton had limited or ceased the use of 20 municipal water supply wells that contained perchlorate. Wellhead treatment systems have been installed on eight of these wells, and these eight wells have been returned to service. However, the remaining 12 wells continue to be unused or are used on a limited basis.

9. Municipal water supply wells in the Rialto, Colton, Chino I and Chino II Groundwater Subbasins have been, or are likely to be, affected by the perchlorate pollution in these basins. Regional Board staff has identified numerous parties, and continues in its efforts to identify all parties that may have discharged perchlorate in these basins.
10. Perchlorate contamination was first detected in groundwater in the Rialto and Chino Groundwater Subbasins in 1997. At that time, the DHS AL for perchlorate in drinking water was 18 parts per billion (ppb). Two wells contained perchlorate exceeding 18 ppb and were shut down. In January 2002, the DHS lowered the AL to 4 ppb. In response to the reduced AL for perchlorate, the local water purveyors in the Rialto and Chino Groundwater Subbasins restricted or eliminated the use of additional production wells with perchlorate concentrations that exceeded 4 ppb. Between 1997 and the present, various perchlorate dischargers, including Astro Pyrotechnics, have been identified.
11. On November 6, 2002, pursuant to California Water Code (CWC) Section 13267, the Executive Officer directed Pyro Spectaculars, Inc. to investigate the 5-acre Astro Pyrotechnics facility.
12. On December 9, 2002, a work plan was submitted for investigation of soil adjacent to the concrete pads that were used for collection of liquid waste at Astro Pyrotechnics. The proposed fieldwork consisted of five exploratory trench excavations to collect soil samples for analysis of perchlorate. On February 6, 2003, Regional Board staff visited the Astro Pyrotechnics facility and inspected the work buildings, including those used for the manufacture of fireworks. Regional Board staff observed that several of the concrete pads contained wastewater and sludge. Concrete is not an effective, permanent barrier to infiltration of liquid, and is therefore not an acceptable waste containment liner. In addition, the pads lacked splash walls, and did not have the capacity necessary to prevent overflow and runoff of waste from a significant storm event.
13. On March 3, 2003, the Executive Officer conditionally approved the work plan for the investigation of the Astro Pyrotechnics facility. The Executive Officer's approval letter required that the work plan be revised to include the collection of soil samples from the areas immediately beneath the existing concrete pads, instead of from areas adjacent to the pads as proposed in the work plan. In addition, Pyro Spectaculars, Inc. was advised that the concrete pads were not acceptable storage facilities for waste and wastewater at the Astro Pyrotechnics facility and that it must cease the practice. The Executive Officer required the installation of permanent containment facilities, such as appropriately lined storage

sumps or ponds, with adequate capacity, as well as secondary containment for the drums of chemical waste that were stored on-site.

14. In accordance with the investigation work plan approved by the Executive Officer, Pyro Spectaculars, Inc. was required to commence its field activities on July 21, 2003. Pyro Spectaculars, Inc. failed to commence the investigation by the specified date; therefore, the Executive Officer issued an administrative civil liability (ACL) complaint against Pyro Spectaculars, Inc., which has been resolved.
15. On November 6, 2003, Kleinfelder (the environmental consultant for Pyro Spectaculars, Inc.) excavated five exploratory trenches in the areas of investigation approved by the Executive Officer. The soil samples were analyzed for volatile organic compounds (VOCs), perchlorate, and electrical conductivity.
16. Perchlorate was found in 12 samples at the site. Samples collected at 1, 5, and 10-foot depths in four of the trenches contained perchlorate. Perchlorate concentrations ranged from 1.2 milligrams per kilogram (mg/kg) to 32 mg/kg. The highest perchlorate concentration of 32 mg/kg was detected at the 10-foot depth adjacent to the former location of one of the concrete waste disposal pads.
17. Based on the results of the soil investigations conducted by Pyro Spectaculars, Inc. at its Astro Pyrotechnics facility, it is evident that perchlorate has been discharged to soil and likely to the underlying groundwater.
18. Based on the historical evidence of suspected perchlorate discharges at the property, and prior to Astro Pyrotechnics collecting soil samples at the property, the Executive Officer issued an Investigation Order to Mr. Thomas O. Peters, on the basis of his ownership of the property, on July 18, 2003. Mr. Peters was ordered to submit a work plan by August 29, 2003 for conducting an investigation to define the lateral and vertical extent of perchlorate in soil and groundwater at the property.
19. On December 18, 2003, an environmental consultant for Mr. Peters submitted a work plan for a limited perchlorate investigation at the property. The proposed fieldwork for the site consisted of 11 exploratory trench excavations to collect soil samples for analysis of perchlorate. None of the proposed work has been conducted by Mr. Peters.
20. Whittaker Corporation is the corporate successor of AMEX Products and Tasker Industries by merger. Based on the use, storage, and disposal of explosives and their components by AMEX Products, Tasker Industries and Whittaker Corporation, the Executive Officer issued an Investigation

- Order to Whittaker Corporation on June 26, 2003. Whittaker Corporation was ordered to conduct a records investigation and submit a report by July 31, 2003 concerning suspected perchlorate discharges at its former Rialto facility.
21. On July 28, 2003, Whittaker Corporation submitted limited information pertaining to AMEX Products and its production activities at the property between 1969 and 1971.
 22. Based on the information submitted on July 28, 2003, the Executive Officer issued a further Investigation Order to Whittaker Corporation on October 21, 2003. Whittaker Corporation was ordered to submit a work plan by December 16, 2003 for conducting an investigation to define the lateral and vertical extent of perchlorate in soil and groundwater in the vicinity of the property.
 23. On January 13, 2004, Whittaker Corporation submitted a work plan for conducting further investigation activities to assess perchlorate at and in the vicinity of the property.
 24. Pyro Spectaculars, Inc., Mr. Thomas O. Peters, and Whittaker Corporation have caused or permitted, or are causing or permitting, waste, i.e., perchlorate, to be discharged or deposited where it is, or probably will be, discharged into the waters of the state, specifically the Rialto Groundwater Subbasin, and have created, or threaten to create, a condition of pollution or nuisance.
 25. The beneficial uses of the Rialto Groundwater Subbasin include:
 - a. Municipal and domestic supply,
 - b. Agricultural supply,
 - c. Industrial service supply, and
 - d. Industrial process supply.
 26. CWC Section 13304 allows the Regional Board to recover reasonable expenses from responsible parties for overseeing cleanup and abatement activities. It is the Regional Board's intent to recover such costs for regulatory oversight work conducted in accordance with this order. Mr. Peters and Whittaker Corporation have already entered into cost recovery agreements with Regional Board staff; Pyro Spectaculars, Inc., has failed to respond to two requests from Regional Board staff for reimbursement of the Regional Board's costs.
 27. This enforcement action is being taken by a regulatory agency to enforce a water quality law. Such action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section

21000, et seq.) in accordance with Section 15321, Article 19, Division 3, Title 14, California Code of Regulations.

28. Additional investigation is necessary to define the vertical and lateral extent of the perchlorate that is discharging, has been discharged, or threatens to be discharged from the property located at 2298 West Stonehurst Drive, Rialto.
29. It is appropriate to order Pyro Spectaculars, Inc., Mr. Thomas O. Peters, and Whittaker Corporation jointly and severally to clean up and abate the effects of the discharge of perchlorate at the property.
30. A similar order may be issued at a later date to former tenants or former owners of other associated or adjacent properties, if Regional Board staff obtains additional information indicating that other specific tenants or owners have also discharged perchlorate that is present in the soil or groundwater.

IT IS HEREBY ORDERED THAT, pursuant to Section 13304, Article 1, Chapter 5, Division 7, of the California Water Code, Pyro Spectaculars, Inc., Whittaker Corporation, and Mr. Thomas O. Peters jointly and severally shall cleanup and abate the effects of the discharge of waste at the property located at 2298 West Stonehurst Drive, Rialto, as follows:

1. Upon approval by the Executive Officer, implement the work plans submitted in response to the Executive Officer's Investigation Orders, or submit an alternate work plan if requested to do so by the Executive Officer. The work plans shall be implemented in accordance with time schedules approved by the Executive Officer.
2. Prepare and implement additional work plans that the Executive Officer deems necessary to sufficiently characterize the lateral and vertical extent of perchlorate that is discharging, has been discharged, or threatens to be discharged to the soil and groundwater from the property. The work plans shall be implemented in accordance with time schedules approved by the Executive Officer.
3. After the Executive Officer determines that the lateral and vertical extent of perchlorate that is discharging, has been discharged, or threatens to be discharged from the property to the soil and groundwater has been sufficiently defined, submit a detailed remedial action plan, including an implementation schedule, to cleanup or abate the effects of the perchlorate that is discharging, has been discharged, or threatens to be discharged, from the property. The remedial action plan and implementation schedule shall be submitted within 60 days of

the Executive Officer's notification to Pyro Spectaculars, Inc., Mr. Thomas O. Peters, and Whittaker Corporation that the definition of the extent of perchlorate is sufficiently complete. The remedial action plan and schedule shall be subject to approval by the Executive Officer.

4. Implement the remedial action plan in 3., above, as approved by the Executive Officer.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on April 30, 2004.

Gerard J. Thibeault
Executive Officer